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WORKING PLAN  
FOR  
SEASON, 1913.

-----:  
IDAHO YELLOW PINE :  
EFFECT OF DIFFERENT :  
METHODS OF CUTTING :  
-----: is to find what methods of silvi-  
cultural management will secure the  
best results in the Idaho Yellow  
Pine type in respect to: (1) Natural Reproduction, (2) Volume  
and value increment per acre per annum.

The method proposed to secure data on these points  
is as follows: To locate fifteen 5 acre permanent sample  
plots or larger plots if the character of the stand makes it  
desirable, on sale areas before cutting; a set of three plots  
each for (1) Group selection cutting, where all merchantable  
trees will be marked on irregular patches or groups not to  
exceed one acre in extent. These groups should cover about  
half of the area of the plot, and the spaces between groups  
should be at least half as wide at the narrowest point as  
the average diameter of the groups; (2) Scattered selection  
cutting, where individual mature trees will be selected for



cutting throughout the stand, taking in all about one-half of the entire merchantable stand, (3) Strip cutting, where all merchantable trees will be marked for cutting on strips about 2 to 3 chains wide, leaving intermediate strips of two chains undisturbed, (4) Clear-cutting with scattered seedtrees, where all merchantable trees will be marked for cutting, except certain individuals left for seed. The seedtrees should number from 2 to 5 per acre, the number depending upon the character of the seedtrees selected, and their apparent seed-producing capacity, as well as upon the amount and size of the young growth present on the ground. (5) Clear-cutting with blocks or groups of seedtrees. Here small compact groups will be reserved for seed, each such group containing two or three good seedtrees, together with the incidental suppressed intermediate and small trees. One or two such groups should be located on each acre, and so selected as to secure small compact groups of thrifty trees well suited to withstand wind damage. The main purpose of this method is to eliminate wind damage and to have only such trees in the groups as will successfully hold over for another rotation.

As mentioned above, three plots are planned for each method of cutting. These plots should be located in the three characteristic topographical sub-types in the Yellow pine; i.e. (1) Ridge and south slope, (2) Bench, basin or flat, and (3) North slope. The first of these is usually pure yellow pine, in rather open stands of poor quality, and reproduction is



often poor on account of the dryness of the site. The Yellow pine flats usually have practically a pure stand of heavy, large trees of fair quality, and with good conditions for reproduction. The north slope sub-type, however, has usually the longest clearest stems of yellow pine. The size of the timber is not remarkable, and there is usually a considerable admixture of Douglas fir and White fir with the yellow pine. Thus the problem of competition of inferior species with the yellow pine is quite acute. The conditions in these three sub-types are so different and the problems of each are sufficiently distinct to warrant separate treatment of each. Therefore, it is suggested that a separate series of plots be established in each.

These 3 groups of plots, for trial of different methods on the 3 sub-types mentioned above, will be located as close together as practicable, in order to secure uniform conditions for comparison of methods as far as possible. An isolation strip of at least one chain will be allowed around each plot, and this strip be treated the same as the plot itself, so that the conditions immediately surrounding it will be uniform with the plot itself, and thus will not affect the results.

On each plot all of the trees will be measured, located and mapped before cutting commences. All trees over 4" D.B.H. will be designated on the map by serial numbers and recorded as to diameter, tree class, height and merchan-



table length. Smaller trees will be indicated by a dot on the map, and recorded simply as seedling tallies in the notes. Within each plot, at least two reproduction plots will be located covering at least 500 square feet each, laid out in whatever shape is most convenient on the ground. On these all seedlings should be located, mapped and recorded by height classes, and a careful description of ground cover, and soil conditions should be made for each reproduction plot. This will furnish a permanent record of conditions and serve as a basis on which to determine any changes in ground cover, humus or soil which may result from the cutting.

In the record of each plot there will be three parts: I. Map or diagram (without use of colors in order that it may be readily duplicated), II. Tabulated data and III. Descriptive data.

The map should show all the data which may be so represented, since the trees over 4" D.B.H. will be numbered; the number is all that is necessary on the map. Smaller trees will be shown by characters different for each species. Brush piles, groups of underbrush, etc., should be shown if essential.

The tables will be separate for the larger sizes which are numbered and the smaller sizes which are grouped in classes.

So far as practicable the reproduction data will be tabulated in classes by height.



The descriptive data should cover all the essential features of the usual forest description such as elevation, slope, exposure, rock formation, soil; its character depth and moisture, average annual rainfall, length of growing season, depth of snowfall, average date of disappearance of snow in spring, usually a detailed description of the underbrush and soil cover will be necessary.

#### Cost

The cost should not exceed \$5.00 per acre for the sample plots including the reproduction plots. The total cost will depend upon the number of acres of plot necessary. It will hardly be possible to have less than 75 acres to cover all the methods and distinct sites. On this basis the approximate cost will be \$375.00.

Subsequent work in future remeasurements is not figured as it is not possible to estimate it closely.